

ABSTRACT OF THE DISCLOSURE

A radio receiver for receiving a selected digital HDTV signal, irrespective of whether it is a complex-amplitude-modulation (QAM) or a vestigial sideband (VSB) signal, using the same tuner. The tuner supplies a final IF signal in a 6 MHz frequency band, the lowest frequency of which is not appreciably more than 2.38 MHz. The final IF signal is digitized for synchrodyning to baseband, with the 2.375 MHz difference between the carrier frequencies of QAM and VSB signals being taken into account in the digital synchrodyning circuitry. The carrier frequencies of the QAM and VSB final IF signals are regulated to be submultiples of symbol frequency by applying automatic frequency and phase control signals developed in the digital circuitry to a local oscillator of the tuner. The presence of the pilot carrier accompanying a selected VSB HDTV signal is detected for automatically switching the radio receiver for operation in a VSB signal reception mode. The absence of pilot carrier accompanying a selected QAM HDTV signal is detected for automatically switching the radio receiver for operation in a QAM signal reception mode.

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